(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



THE CONTRACT OF THE CONTRACT O

(43) International Publication Date 12 September 2003 (12.09.2003)

PCT

(10) International Publication Number WO 03/074426 A1

- (51) International Patent Classification⁷: C01G 23/07, B01J 35/02, C08L 83/04, C08K 3/22, H01L 31/04, H01M 14/00
- (21) International Application Number: PCT/JP03/02673
- (22) International Filing Date: 6 March 2003 (06.03.2003)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2002-060541 60/363,305 6 March 2002 (06.03.2002) J 11 March 2002 (11.03.2002) U

wh 2002 (06 03 2002) IP

- (71) Applicant (for all designated States except US): SHOWA DENKO K. K. [JP/JP]; 13-9, Shiba Daimon 1-chome, Minato-ku, Tokyo 105-8518 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): KAYAMA, Susumu [JP/JP]; C/O SHOWA TITANIUM CO. LTD., 3-1, Nishinomiyamachi, Toyama-shi, Toyama 931-8577 (JP). TANAKA, Jun [JP/JP]; C/O SHOWA TITANIUM CO. LTD., 3-1, Nishinomiyamachi, Toyama-shi, Toyama 931-8577 (JP).

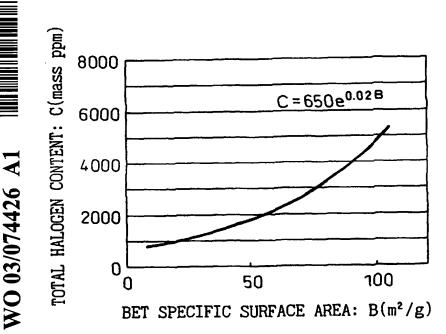
- (74) Agents: ISHIDA, Takashi et al.; A. AOKI, ISHIDA & ASSOCIATES, Toranomon 37 Mori Bldg., 5-1, Toranomon 3-chome, Minato-ku, Tokyo 105-8423 (JP).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ULTRAFINE PARTICULATE TITANIUM OXIDE WITH LOW CHLORINE AND LOW RUTILE CONTENT, AND PRODUCTION PROCESS THEREOF



(57) Abstract: anatase-type An ultrafine particulate titanium oxide produced through a vapor-phase process, which has low chlorine content and exhibits excellent dispersibility as compared with conventional titanium oxide having a BET specific surface area comparable to that of the ultrafine particulate titanium oxide. When the ultrafine particulate titanium oxide is subjected to dechlorination, the titanium oxide satisfies the relation between BET surface area (B) and chlorine content (C) represented by the aforementioned formula (2). The ultrafine particulate titanium oxide has a D90 of 2.5 (m or less as measured by means of laser diffraction particle size analysis. The present invention also provides a process for producing the ultrafine particulate titanium oxide.